Johnson & Johnson

**CORPORATE HEADQUARTERS**
**PATENT LAW DEPARTMENT**
ONE JOHNSON & JOHNSON PLAZA
NEW BRUNSWICK, NEW JERSEY 08933

# FACSIMILE TRANSMISSION COVER SHEET

TO: Winston M. Alvarado

FACSIMILE NUMBER: (703) 305-3230

FROM: **Laura Donnelly**
**Senior Patent Counsel**
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**One Johnson & Johnson Plaza**
**New Brunswick, NJ 08933-7003**
**Tel: (732) 524-1729**

**J&J FACSIMILE NUMBER: (732) 524-2134**

DATE: January 5, 2004

Pages (including cover page): 23

COMMENTS:

**RE: 09/869,079 (OUR REF. NO. JAB-1458).**
**In response to your request, attached is a copy of the Petition for Revival and related papers ~~submitted~~ deposited with the U.S. Post Office on September 30, 2003. Included is the date stamped post card, dated October 3, 2003, acknowledging the Patent Office's receipt of the documents. Not included is a computer copy of the Sequence Listing for obvious reasons. I understand that you will forward these documents to legal for its determination of the petition. We will keep a copy of the Notification of Abandonment mailed December 4, 2003 in our files and await resolution of the petition.**

IF THERE IS A PROBLEM WITH THIS TRANSMISSION, PLEASE CALL
(732) 524-1760

Serial No. 09/869,079 Docket No. JAB-1458 By: LAD

Application of: Masure et al. Mailed: Sept. 30, 2003

Entitled: Human AKT-3

**THE FOLLOWING HAS BEEN RECEIVED IN THE U.S. PATENT OFFICE ON THE DATE STAMPED HEREON:**

- ☐ Oath or Declaration
- ☐ Assignment
- ☒ Charge to Deposit Account 10-0750
- ☐ Amendment
- ☐ Extension of Time
- ☐ Issue Fee Transmittal
- ☐ PCT Filing _____
- ☐ IDS-Form 1449
- ☐ Drawings ___ sheets
- ☐ MPEP 609/_____
- ☐ Notice of Appeal
- ☐ Brief
- ☐ Priority Document
- ☐ Status Inquiry
- ☒ Sequence Listings/Diskette + verified statement
- ☐ Biological Deposit Declaration
- ☒ Other Petition for Revival of an Application, Response to Notice of Defective Response + Preliminary Amendment

DOCKET NO.: JAB-1458

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | | | |
|---|---|---|---|
| Applicants: | Masure et al. | Art Unit: | Unknown |
| Serial No.: | 09/869,079 | Examiner: | Unknown |
| Filed: | I.A. 12/17/99 | | |
| For: | HUMAN AKT-3 | | |

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: MAIL STOP PETITION, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

September 30, 2003

(Date of Deposit)

Laura A. Donnelly

Name of applicant, assignee, or Registered Representative

Laura A. Donnelly

(Signature)

September 30, 2003

(Date of Signature)

MAIL STOP PETITION
Commissioner for Patents
P.O. Box 1450
Arlington, VA 22313-1450

**PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(b)**

The above-identified application became abandoned for failure to file a timely and proper reply to a notice or action by the United States Patent and Trademark Office. The date of abandonment is the day after the expiration date of the period set for reply in the Office notice or action plus an extensions of time actually obtained.

NOTE: A grantable petition requires the following items:

(1) Petition fee;
(2) Reply and/or issue fee;
(3) Terminal disclaimer with disclaimer fee –required for all utility and plant applications filed before June 8, 1995; and for all design applications; and
(4) Statement that the entire delay was unintentional.

1. Petition fee
   - ☐ Small entity-fee $ _____ (37 CFR 1.17(m)). Applicant claims small entity status. See 37 CFR 1.27.
   - ☒ Other than small entity-fee $ 110.00 (37 CFR 1.17(m))

2. Reply and/or fee
   - A. The reply and/or fee to the above-noted Office action in the form of Response to Notice of Defective Response and Preliminary Amendment, including sequence listing ~~(identify type of reply)~~:
     - ☐ has been filed previously on _____.
     - ☒ is enclosed herewith.
   - B. The issue fee of $_____.
     - ☐ has been paid previously on _____.
     - ☐ is enclosed herewith.

3. Terminal disclaimer with disclaimer fee
   - ☒ Since this utility/plant application was filed on or after June 8, 1995, no terminal disclaimer is required.
   - ☐ A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of $_____ for a small entity or $_____ for other than a small entity) disclaiming the required period of time is enclosed herewith (see PTO/SB/63).

4. STATEMENT: The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional. [NOTE. The United States Patent and Trademark Office may require additional information if there is a question as to whether either the abandonment or the delay in filing a petition under 37 CFR 1.137(b) was unintentional (MPEP 711.03(c), subsections (III)(C) and (D))].

5. Fee payment:
   - ☒ Charge the petition fee of $110.00 to Account 10-0750/JAB-1458/LAD and for any additional fee required. A duplicate of this petition is attached.
   - ☐ A check in the sum of $_____ is attached.
   - ☒ Charge Account 10-0750/JAB-1458/LAD for any additional fee required.

Laura A. Donnelly
Reg. No.: 38,435
Attorney for Applicant(s)

JOHNSON & JOHNSON
One Johnson & Johnson Plaza
New Brunswick, NJ 08933
Tel. No.: (732) 524-1729

Date: September 30, 2003

Enclosures:
- ☒ Fee Payment
- ☐ Terminal Disclaimer Form
- ☒ Reply
- ☐ Additional sheets containing statements establishing unintentional delay
- ☒ Other: Preliminary Amendment and Sequence Listing

Docket No. JAB-1458

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | | |
|---|---|---|
| Applicants | : | MASURE et al. |
| Serial No. | : | 09/869,079 |
| Filed | : | I.A. 12/17/99 |
| Title | : | HUMAN AKT-3 |
| Art Unit | : | Unassigned |
| Examiner | : | Unassigned |

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

September 30, 2003
(Date of Deposit)

Laura A. Donnelly
(Name of applicant, assignee, or Registered Representative)

Laura A. Donnelly
(Signature)

September 30, 2003
(Date of Signature)

MAIL STOP PETITION
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**RESPONSE TO NOTICE OF DEFECTIVE RESPONSE AND PRELIMINARY AMENDMENT**

Dear Sir:

Prior to examination on the merits, please amend the above-identified application as follows:

**Amendments to the Specification**

Please replace the paragraph beginning at page 3, line 20, with the following amended paragraph:

Figure 1 is an alignment of the deduced amino acid sequences for human Akt-1, Akt-2 and Akt-3 (SEQ ID No. 3). The sequences were aligned using the ClustalW alignment program (EMBL, Heidelberg, Germany). Amino acid residues conserved between all three proteins are included in the black areas. Residues conserved between only two of the sequences are shaded in grey. Amino acid residues are numbered in the right hand column. The conserved Thr and Ser residues that are presumed to be phosphorylated upon activation are marked with an asterisk above the sequence.

Please replace the paragraph beginning at page 19, line 16, with the following amended paragraph:

**Molecular cloning of human Akt-3.**

Using the rat RAC-Pkγ sequence (Konishi et al, 1995; GenBank acc. No. D49836) as a query sequence, a BLAST (Basic Local Alignment Search Tool; Altschul et al., 1990) search was carried out in the WashU Merck expressed sequence tag (EST) database (Lennon et al., 1996) and in the proprietary LifeSeq™ human EST database (Incyte Pharmaceuticals Inc, Palo Alto, CA, USA). Several human EST clones with high similarity to the rat RAC-Pkγ were identified. One EST sequence (Incyte accession number 2573448) derived from a hippocampal cDNA library, contained part of the coding sequence including the putative methionine start codon (ATG) and part of the 5' untranslated region. The start codon was surrounded by a Kozak consensus sequence for translation start and an in-frame stop codon was present at positions –6 to –3. Based on this 239 bp sequence, oligonucleotide sense primers were synthesised for 3' rapid amplification of cDNA ends (3' RACE) experiments: Akt-3sp1 = 5'-ACC ATT TCT CCA AGT TGG GGG CTC AG-3' (SEQ ID No: 4) and Akt-3sp2 = 5'GGG AGT CAT CAT GAG CGA TGT TAC C-3' (SEQ ID No: 5). 3'RACE experiments were performed on human fetal brain or human cerebellum Marathon-Ready™ cDNA (Clontech Laboratories, Palo Alto, CA, USA) according to ~~manufacturer's~~ manufacturers instructions using Akt-3sp1/race-ap1 as primers in the primary PCR and Akt-3sp2/race-ap2 in the nested PCR. Resulting PCR

fragments were cloned and sequenced. This extended the Akt-3 coding sequence by 916 bp, but the novel sequence did not include an in-frame stop codon. A second round of 3' RACE amplification was performed on human brain Marathon-Ready™ cDNA using sense primers based on the sequence obtained in the first round (Akt-3sp3 = 5'CAC TCC AGA ATA TCT GGC ACC AGA GG-3' (SEQ ID No: 6) and Akt-3sp4 = 5' CTA TGG CCG AGC AGT AGA CTG GTG G-3' (SEQ ID No. 7)) in combination with race-ap1 and race-ap2, respectively. The sequence obtained included an in-frame stop codon and the 3' untranslated sequence up to the poly(A) tail. Antisense primers were designed based on the 3' untranslated region (Akt-3ap4 = 5'-TGC CCC TGC TAT GTG TAA GAG CTA GG-3' (SEQ ID No: 8)) and Akt-3ap5 = 5' AAG AGC TAG GAC TGG TGA TGT CCA GG-3' (SEQ ID No: 9)) and the complete Akt-3 coding sequence was amplified from human hippocampal cDNA using Akt-3sp1/Akt-3ap4 (primary PCR) and Akt-3sp2/Akt-3ap5 (nested PCR) as primers. The resulting 1200 bp PCR fragment was then cloned in the TA-cloning vector pCR2.1 (original TA cloning kit, Invitrogen BV, Leek, The Netherlands) and the inserts of several clones were completely sequenced. One clone containing an insert with the confirmed sequence (hAkt-3/pCR2.1) was used for subsequent subcloning to the mammalian expression vector pcDNA-3 (Invitrogen), yielding construct hAkt-3/pcDNA-3. In order to make a construct coding for a COOH-terminal tagged Akt-3 protein, a fragment of 553 bp was amplified from plasmid Akt-3/pcDNA-3 using an antisense primer incorporating a *Xho*I restriction site and the sequence coding for a hemagglutinin (HA) tag (YPYDVPDYA) after amino acid 479 of the Akt-3 sequence. This fragment was recloned into plasmid hAkt-3/pcDNA-3 using *Bst*EII and *Xho*I restriction sites yielding construct HA-hAkt-3/pcDNA-3.

Please replace the paragraph beginning at page 25, line 2, with the following amended paragraph:

**Reverse transcription (RT)-PCR analysis**

Oligonucleotide primers were designed for the specific PCR amplification of a fragment from Akt-3. These primers were Akt-3sp2 = 5' –GGG AGT CAT CAT GAG CGA TGT TAC C-3' (SEQ ID No: 10) (sense primer) and Akt-3ap1 = 5' – GGG TTG TAG AGG CAT CCA TCT CTT CC – 3' (SEQ ID No: 11) (antisense primer), yielding a 425 bp product. PCR amplifications for human glyceraldehyde-3-phosphate dehydrogenase (G3PDH) were performed

on the same cDNA samples as positive controls using G3PDH primers 5' – TGA AGG TCG GAG TCA ACG GAT TTG GT-3' (sense primer) and 5' –CAT GTG GGC CAT GAG GTC CAC CAC-3' (antisense primer), yielding a 1000 bp fragment. These primers were used for PCR amplifications on Multiple Tissue cDNA panels (Clontech Laboratories) and on cDNA prepared from tumor cell lines. For the preparation of tumor cell cDNA, cells were homogenised and total RNA prepared using the RNeasy Mini kit (Qiagen GmbH, Hilden, Germany) according to manufacturer's instructions. 1 Fg of total RNA was reverse transcribed using oligo$(dT)_{15}$ as a primer and 50 U of Expand™ Reverse Transcriptase (Boehringer Mannheim, Mannheim, Germany) according to the manufacturer's instructions. PCR reactions with Akt-3-specific or G3PDH-specific primers were then performed on 1 Fl of cDNA. Images of the ethidium bromide stained gels were obtained using the Eagle Eye II Video system (Stratagene, La Jolla, CA, USA) and PCR bands analysed using the EagleSight software.

Please replace the paragraph beginning at page 27, line 20, with the following amended paragraph:

The predicted Akt-3 (Figure 1) protein shows significant similarity with Akt-1 (Jones et al., 1991; 83.6% identity; 87.8% similarity) and with Akt-2 (Cheng et al., 1992; 78% identity; 84.3% similarity). The COOH-terminal tail=has been observed in both human and rat Akt-1 and Akt-2 proteins, but it is apparently truncated in the only other reported Akt-3 sequence (rat Akt-3, Konishi et al., 1995; accession number D49836). 3'RACE experiments performed on human cDNAs derived from different tissues did not yield evidence for the existence of a shorter form of Akt-3 that would be analogous to the rat Akt-3 (data not shown). The tail in human Akt-3 comprises 28 amino acid residues (YDEDGMDCMDNERRPHFPQFSYSASGRE) (SEQ ID No: 12) that replace 3 amino acid residues in the rat sequence (CPL). The tail in human Akt-3 contains a serine residue at position 472 (shown in bold) that corresponds to $Ser^{473}$ in Akt-1 or $Ser^{474}$ in Akt-2. Phosphorylation of $Ser^{473}$ and $Ser^{474}$ has previously been implicated in the activation of Akt-1 and Akt-2, respectively (Alessi et al., 1996; Meier et al., 1997). $Thr^{308}$ (in the kinase domain) has also been implicated in the activation of Akt-1 and this residue is also conserved in human Akt-3 ($Thr^{305}$).

Please replace pages 45-51 with pages 45-53 attached hereto.

**Amendment to the Drawings**

The amendment to the drawings is attached hereto as a replacement sheet for Fig. 1.

## REMARKS

In response to the Notification of Defective Response, dated December 5, 2002, enclosed herewith is a computer readable Sequence Listing, a paper copy and the required Verification Statement Under 37 C.F.R. 1.821(f). This response is also accompanied by a Petition for Revival of an Application for Patent Abandoned Unintentionally Under 37 C.F.R. 1.137(b). As indicated in the Notification, although Applicants originally provided a computer readable Sequence Listing, the copy provided did not comply with 37 C.F.R. §§ 1.821-1.825. Applicants respectfully submit that all of the requirements for the Notification have now been met. Early consideration and prompt allowance of the pending claims are respectfully requested.

Respectfully Submitted,

Laura A. Donnelly
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(732) 524-2134 (facsimile)

Dated: September 30, 2003

Enclosures:
- Revised Fig. 1
- Computer Readable Sequence Listing
- Paper Copy
- Verification Statement Under 37 C.F.R. 1.821(f)

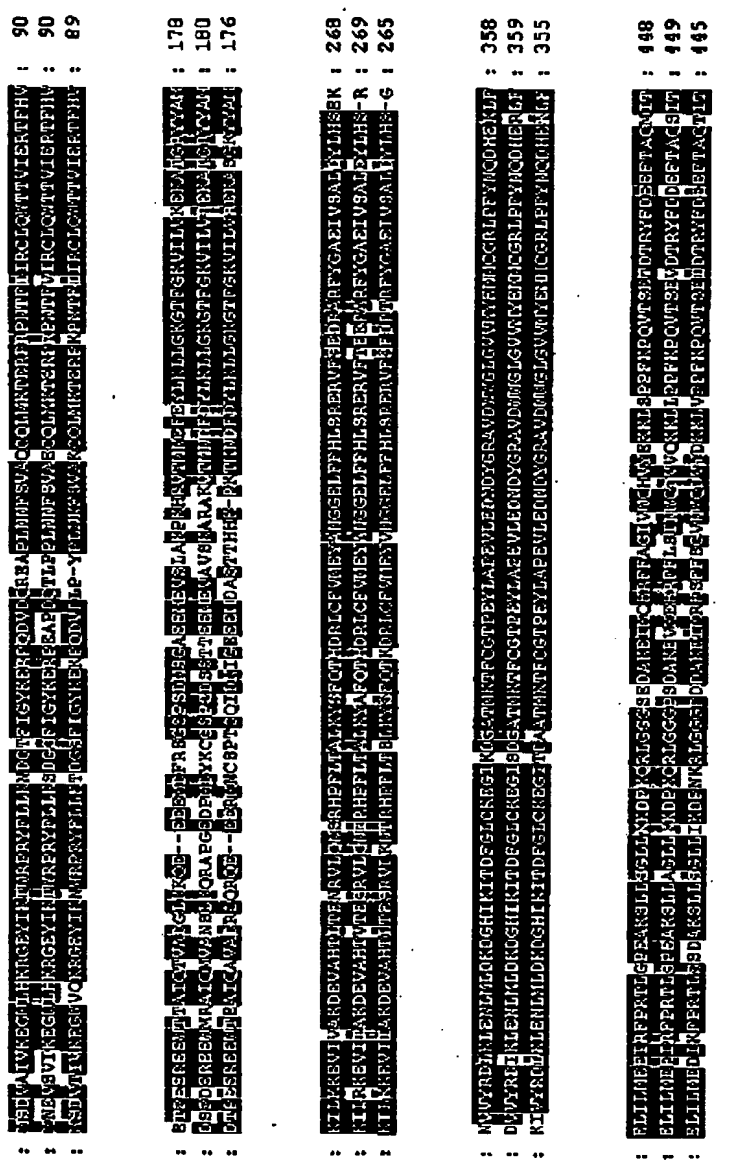

FIGURE 1

DOCKET NO.: JAB-1458

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: MASURE et al.

For: HUMAN AKT-3

Filed: I.A. 12/17/99

Serial No: 09/869,079

**VERIFIED STATEMENT UNDER 37 CFR §1.825**

I hereby verify that the computer readable diskette and paper copy enclosed herewith include no new matter, and that this statement is made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully Submitted,

Laura A. Donnelly

Laura A. Donnelly
Registration No. 38,435

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(732) 524-1729 (direct)
(732) 524-2134 (facsimile)

Dated: September 30, 2003

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